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20 February 1969

MEMORANDUM FOR: Sensor Systems Division, R&D, OSA

SUBJECT:

Provision for use of Bottled Gas

for IRIS II Configuration

REFERENCE:

Memorandum from SSD/R&D/OSA to D/O/OSA, D/M/OSA and IDEA/OSA dated 19 February

1969; Subject: Same as Above (IDEA 0180-69)

- 1. This memorandum is a joint response between the Deputy for Operations, Deputy for Materiel and the IDEALIST Division to referenced memorandum.
- 2. Although the air bottle system is vibration free, several other considerations must be entertained before this method could be accepted. Following questions need answers:
 - a. What is the cost?
 - b. What additional weight will be involved? When weight is added to this aircraft, a loss of altitude and range will be experienced. We cannot afford that.
 - c. What space will be required? As a result of the instrumentation package, it has been determined that the present "Q" bay temperature, even after two hours at altitude, is still below the optimum camera operating requirements. Modifications will be required to provide additional head to raise the "Q" bay temperature to that required. Space and additional weight will be required for this modification.
 - d. As you are aware, the first Iris II tests were performed with air bottles. Freezing of the reducing valves occurred after one half hour of operation which negated any further camera testing on one mission. Is there any reassurance that this valve freezing can positively be eliminated with a bottle system?

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- 3. Before concurring with referenced memorandum we recommend the following:
 - a. That further research be conducted on shock mounting the Iris II Configuration, the present air compressor and/or both.
 - b. Research should continue on using a centrifugal type pump which from all previous indications does not have the vibration characteristics of the piston type pump.

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